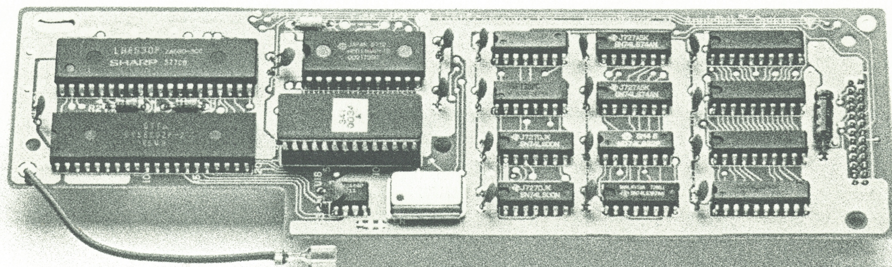


ImageWriter® II/LQ LocalTalk™ Option User's Guide



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If you discover physical defects in the manuals distributed with an Apple product or in the media on which a software product is distributed, Apple will replace the media or manuals at no charge to you, provided you return the item to be replaced with proof of purchase to Apple or an authorized Apple dealer during the 90-day period after you purchased the software. In addition, Apple will replace damaged software media and manuals for as long as the software product is included in Apple's Media Exchange Program. While not an upgrade or update method, this program offers additional protection for up to two years or more from the date of your original purchase. See your authorized Apple dealer for program coverage and details. In some countries the replacement period may be different; check with your authorized Apple dealer.

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Warning

This equipment has been certified to comply with the limits for a Class B computing device, in accordance with the specifications in Subpart J of Part 15 of FCC rules. See instructions if interference to radio or television reception is suspected.

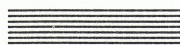
DOC Class B Compliance This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the radio interference regulations of the Canadian Department of Communications.

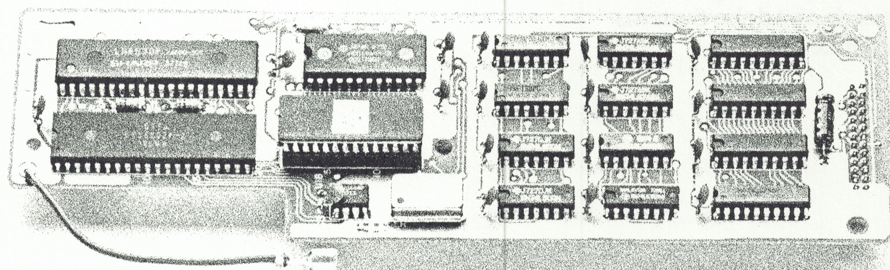
Observation des normes—Classe B Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la Classe B prescrites dans les règlements sur le brouillage radioélectrique édictés par le Ministère des Communications du Canada.





Apple® ImageWriter® II/LQ LocalTalk™ Option User's Guide





Contents

Figures and tables

Chapter 1 Installation and Connection 1

Radio and television interference

The equipment described in this manual generates and uses radio-frequency energy. If it is not installed and used properly—that is, in strict accordance with Apple's instructions—it may cause interference with radio and television reception.

This equipment has been tested and complies with the limits for a Class B computing device in accordance with the specifications in Subpart J, Part 15, of FCC rules. These rules are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that the interference will not occur in a particular installation, especially if a "rabbit-ear" television antenna is used. (A rabbit-ear antenna is the telescoping-rod type usually found on television receivers.)

You can determine whether your computer is causing interference by turning it off. If the interference stops, it was probably caused by the computer or its peripheral devices.

If your computer system does cause interference to radio or television reception, you can try to correct the interference by using one or more of the following measures:

- Turn the television or radio antenna until the interference stops.
- Move the computer to one side or the other of the television or radio.
- Move the computer farther away from the television or radio.
- Plug the computer into an outlet that is on a different circuit than the television or radio. (That is, make certain the computer and the radio or television are on circuits controlled by different circuit breakers or fuses.)
- Consider installing a rooftop television antenna with a coaxial cable lead-in between the antenna and the television.

If necessary, consult your authorized Apple dealer or an experienced radio/television technician for additional suggestions.

You may find helpful the following booklet, prepared by the Federal Communications Commission: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington, DC 20402.

Important This product was FCC-certified under test conditions that included use of shielded cables and connectors between system components. It is important that you use shielded cables and connectors to reduce the possibility of causing interference to radios, television sets, and other electronic devices. For Apple peripheral devices, you can obtain the proper shielded cable from your authorized Apple dealer. For non-Apple peripheral devices, contact the manufacturer or dealer for assistance.

Preface

The ImageWriter® II/LQ LocalTalk™ Option allows ImageWriter II and ImageWriter LQ printers to receive data from up to 31 devices in an AppleTalk® network system linked by LocalTalk cables and connectors.

An **AppleTalk network system** is an environment of interconnected computers that share information, software services, and hardware resources. **LocalTalk** cables and connectors are one way of connecting devices in an AppleTalk network system.

❖ *By the way:* You may see references in other documents to *AppleTalk* cables and to the ImageWriter II/LQ *AppleTalk* Option card. AppleTalk cables and the ImageWriter II/LQ AppleTalk Option card are functionally identical to LocalTalk cables and to the ImageWriter II/LQ LocalTalk Option card. The name was changed to distinguish the AppleTalk network system from one of several cable systems that supports the network.

Installing the LocalTalk Option is simple, even if you've never worked with computer hardware and software before. Just follow the step-by-step instructions in this manual, and you'll have your ImageWriter printer connected to the network in a very short time.

You can use an ImageWriter LQ with Macintosh Plus or later computers. You can use an ImageWriter II with Macintosh 512K or later computers. You can use ImageWriter LQ or ImageWriter II printers with any Apple II computer with AppleTalk capability.

About this manual

This manual describes how to install the ImageWriter II/LQ LocalTalk Option so you can use an ImageWriter II or an ImageWriter LQ printer in an AppleTalk network system.

It shows you how to do five things:

- install the LocalTalk card in your ImageWriter
- connect your ImageWriter to the network
- print over the network
- test and troubleshoot your ImageWriter II/LQ LocalTalk Option installation
- disconnect your printer from the network and reconnect it to the network

This manual assumes that you have already set up your AppleTalk network system. If you have not set up the network yet, do it now. Refer to the *LocalTalk Cable System Owner's Guide* that comes with your LocalTalk Locking Connector Kit.

Chapter 1

Installation and Connection

To install the ImageWriter II/LQ LocalTalk Option card in your printer, read the next section on equipment, and then turn to the section for your ImageWriter. When you have installed your LocalTalk card and connected your printer to the AppleTalk network system, go on to the chapter for your computer to read about installing printer resources and choosing your ImageWriter.

What you need

Before adding your ImageWriter to the network, make sure that you have everything you'll need. Besides this user's guide, you should have

- ☐ the **LocalTalk Option package,** containing
  - ☐ the LocalTalk card
  - ☐ the *ImageWriter II/LQ AppleTalk* disk
  - ☐ a package of four support posts (for the ImageWriter II)
- ☐ a **LocalTalk Locking Connector Kit,** containing
  - ☐ a LocalTalk connector box
  - ☐ a LocalTalk 2-meter shielded cable
  - ☐ a LocalTalk cable extender
- ☐ a small Phillips screwdriver

Figure 1-1 shows all the items listed above.

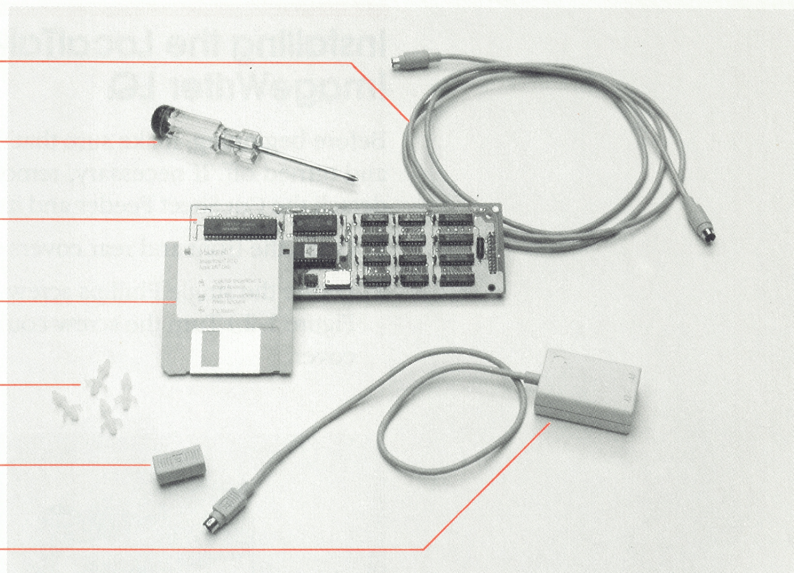


Figure 1-1
What you need

Optionally, you may also need a 10-meter extension cable, available in the LocalTalk Locking Cable Kit—10 Meter. See your authorized Apple dealer or representative for information on these and other LocalTalk products.

Now, turn to the section for the ImageWriter LQ or ImageWriter II printer to learn how to install the LocalTalk Option card.

Warning **This equipment is intended to be electrically grounded.**

Your ImageWriter is equipped with a three-wire grounding plug—a plug that has a third (grounding) pin. This plug will fit only a grounded AC outlet. This is a safety feature.

If you are unable to insert the plug into the outlet, contact a licensed electrician to replace the outlet with a properly grounded outlet.

Do not defeat the purpose of the grounding plug!

Installing the LocalTalk card in your ImageWriter LQ

Before beginning, make sure that the ImageWriter LQ is plugged in and turned off. If necessary, remove paper from the printer, and detach the Cut Sheet Feeder and its paper guide plate.

1. Open the front and rear covers of the printer.
2. Locate the single Phillips screw at the left rear of the printer. (See Figure 1-2.) Turn the screw counterclockwise to free the card cover.

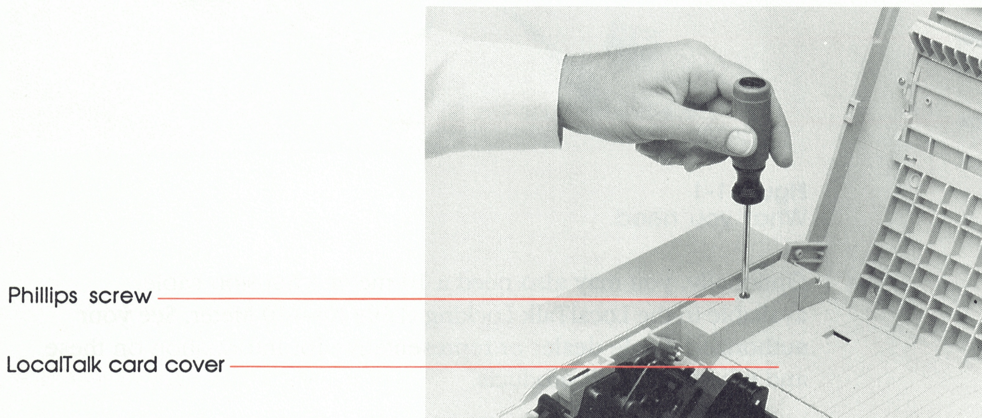


Figure 1-2
Removing the LocalTalk card cover

3. Grasping the plastic tab under the screw with your free hand, lift the cover and screw and set them aside.

Warning Never install or remove an interface card or touch circuitry parts when the printer is on. Doing so can damage the printer or its interface card.

Before toucing the card, be sure to touch the metal frame inside the printer to discharge any static electricity that has accumulated on your clothes or body.

---

4. Remove the LocalTalk card from its anti-static bag, handling the card by its edges. Avoid touching the card's components.

Important Save the card's anti-static bag. If you ever need to remove, store, or transport the card, return it to the bag to protect it from electrostatic damage. To protect the card from breakage, put it between the foam cushions in its box.

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5. Locate the metal lug in the card chamber on the floor of the printer. (See Figure 1-3.) Slide the connector on the end of the card's ground wire over the post on this lug.

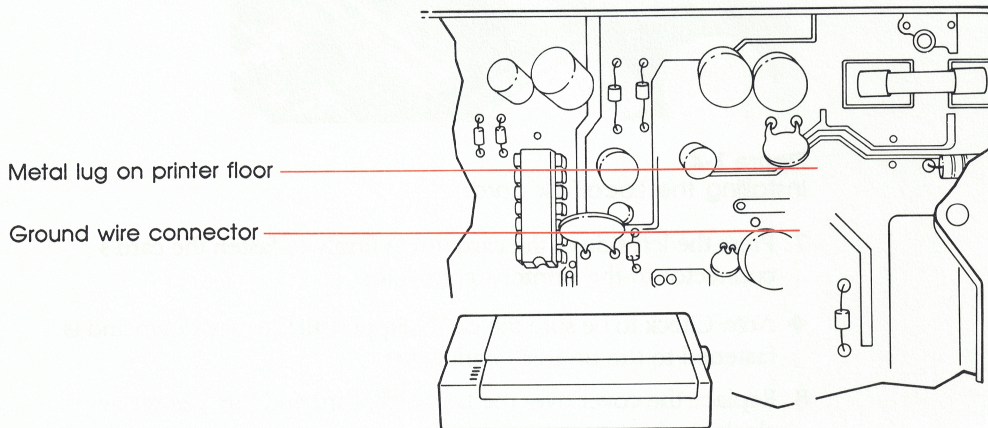


Figure 1-3
Connecting the LocalTalk card ground wire

6. Holding the card on the right side (component side up), lower the right end onto the plastic support post. (See Figure 1-4.)

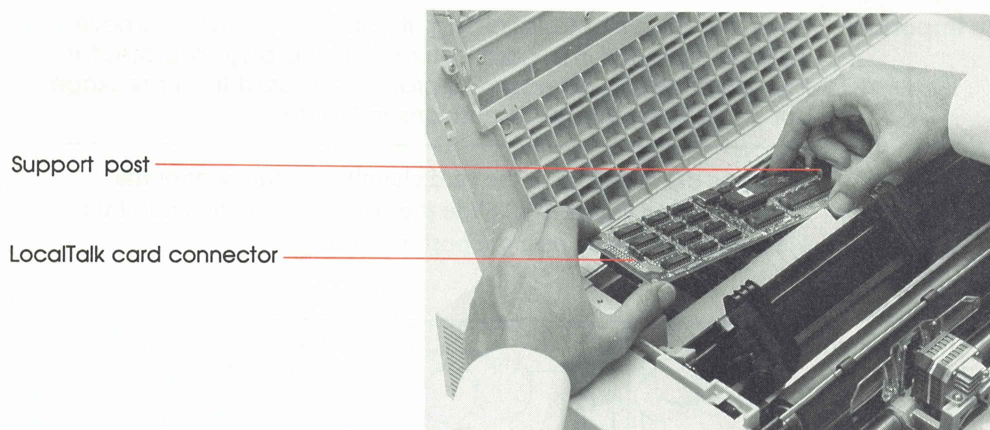


Figure 1-4
Installing the LocalTalk card

7. Press the left side of the card down firmly to fasten the card's connector to the printer's connector.

❖ *Note:* Check to be sure the card snapped all the way down and is fastened to the printer's connector.

8. Replace the cover over the LocalTalk card and turn the screw clockwise to tighten it.

Now you're ready to set the DIP switch to print in an AppleTalk network system.

Setting the DIP switch for the ImageWriter LQ

DIP stands for *dual in-line package.*

Before you can use your printer in an AppleTalk network system, you need to set one **DIP** switch at the left rear of the printer. The switch tells the printer that it will receive its data from a device in an AppleTalk network system instead of directly from a computer.

Warning Do not run your ImageWriter LQ in an AppleTalk network system unless DIP switch SW2-4 is in the closed, or down, position. Running the printer on the network with the switch in the up position could stop the network from functioning.

1. Make sure the printer is off.
2. Open the DIP switch cover at the left rear of the printer with your fingernail. (See Figure 1-5.)



Figure 1-5
DIP switch cover

3. Locate the middle block (SW2) of switches. Open DIP switches point toward the back of the printer; closed DIP switches point toward the front. The DIP switch label on the inside of the cover identifies default switch positions. You need to change one switch (SW2-4) to print in an AppleTalk network system. (See Figure 1-6.)
4. With a small screwdriver or pen, flip switch 4 on block SW2 to the closed, or down, position, toward the front of the printer.

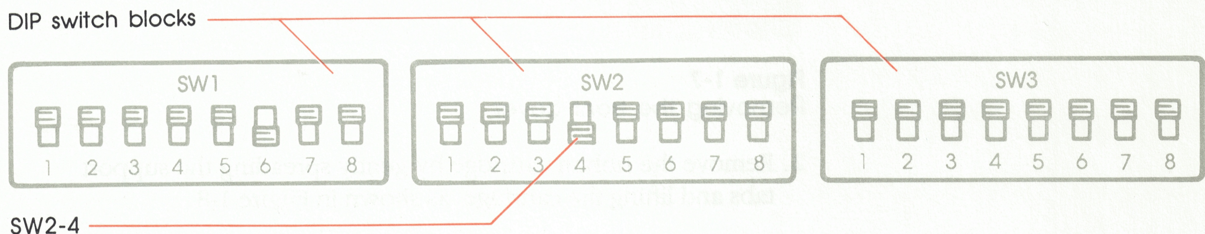


Figure 1-6
Correct settings for ImageWriter LQ DIP switches in an AppleTalk network system

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Warning Do not change DIP switch block SW3 yourself. Only authorized Apple dealer technicians should change switches in SW3.

---

5. Replace the DIP switch cover.
6. Reload your paper.
7. Close the rear and front covers of the printer.

Now turn to the section "Connecting to the Network" to finish your hardware installation.

Installing the LocalTalk card in your ImageWriter II

Before beginning, make sure that the ImageWriter II is plugged in and turned off.

1. Remove the front cover of the ImageWriter II by grasping its sides at the arrow icons and lifting upward. (See Figure 1-7.)

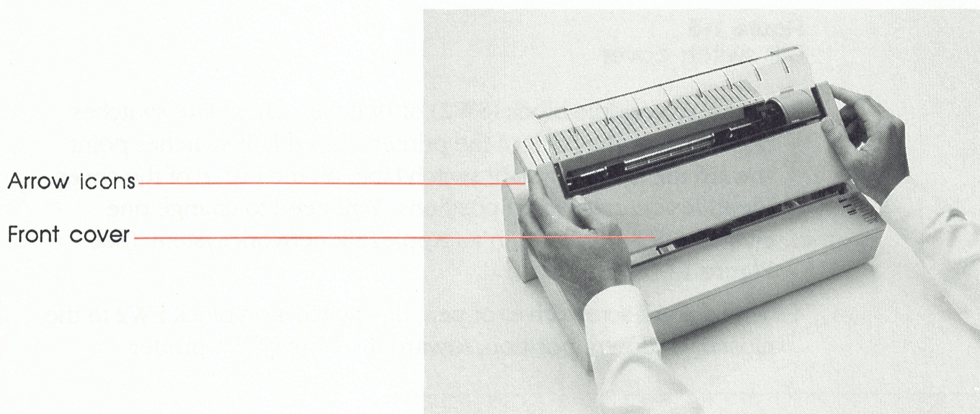


Figure 1-7
Removing the front cover

2. Remove the ribbon cartridge by gently spreading the support tabs and lifting the cartridge, as shown in Figure 1-8.

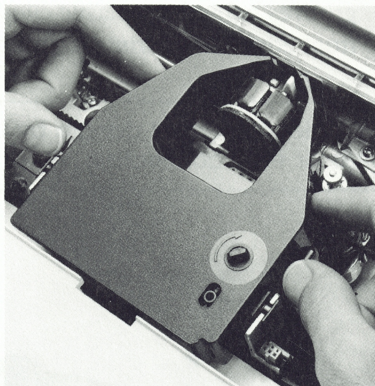


Figure 1-8
Removing the ribbon cartridge

3. Gently slide the ribbon cartridge deck all the way to the left. (See Figure 1-9.)

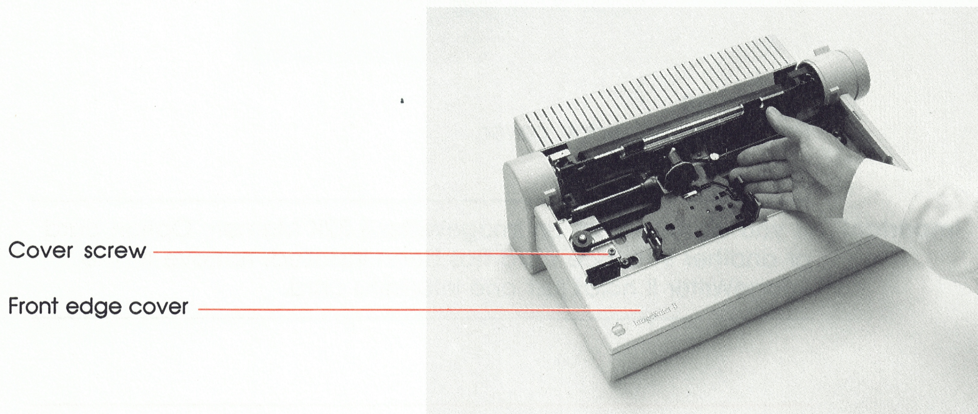


Figure 1-9
Sliding the ribbon cartridge deck

Warning Never install or remove an interface card or touch circuitry parts when the printer is on. Doing so can damage the printer or its interface card.

---

4. Turn the screws in the front edge cover counterclockwise until they feel very loose.

5. Gently lift the front edge cover up and toward you. Using the grooves behind the plastic clips, carefully set the cover on the front edge of the printer frame. (See Figure 1-10.)

Warning Don't let the cover dangle by its wires. This can loosen the wires or their connectors.

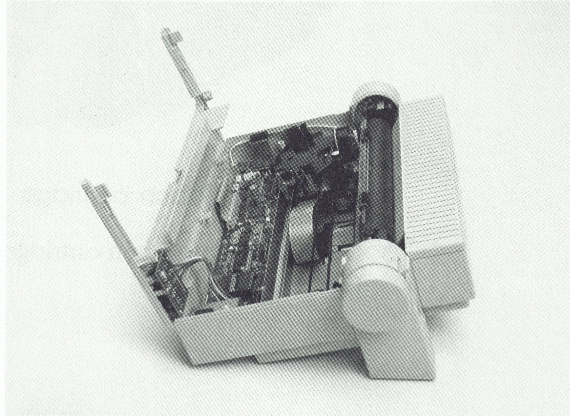


Figure 1-10
Removed front edge cover

Important If you discover that an ImageWriter II 32K Memory Option card or another interface card has been installed, remove it. The ImageWriter II holds just *one* interface card.

Setting the DIP switch for the ImageWriter II

DIP stands for *dual in-line package.*

Before you can print in an AppleTalk network system, you need to set one **DIP** switch. The switch tells the printer that it will receive its data from a device in the AppleTalk network system instead of directly from a computer.

Warning Do not run your ImageWriter II on an AppleTalk network unless DIP switch SW2-4 is in the closed, or down, position. Running the printer on the network with the switch in the up position could stop the network from functioning.

1. Make sure the printer is off.
2. Slide the ribbon cartridge deck to the right to gain access to the DIP switches
3. Locate the two DIP switch blocks in the front left corner of the ImageWriter II. Open DIP switches point toward the back of the printer; closed DIP switches point toward the front. You need to change one switch (SW2-4) to print in an AppleTalk network system.
4. With a small screwdriver or strong fingernail, flip switch 4 on block SW2 (the block on the right) to the closed, or down, position, toward the front of the printer, as shown in Figure 1-11.

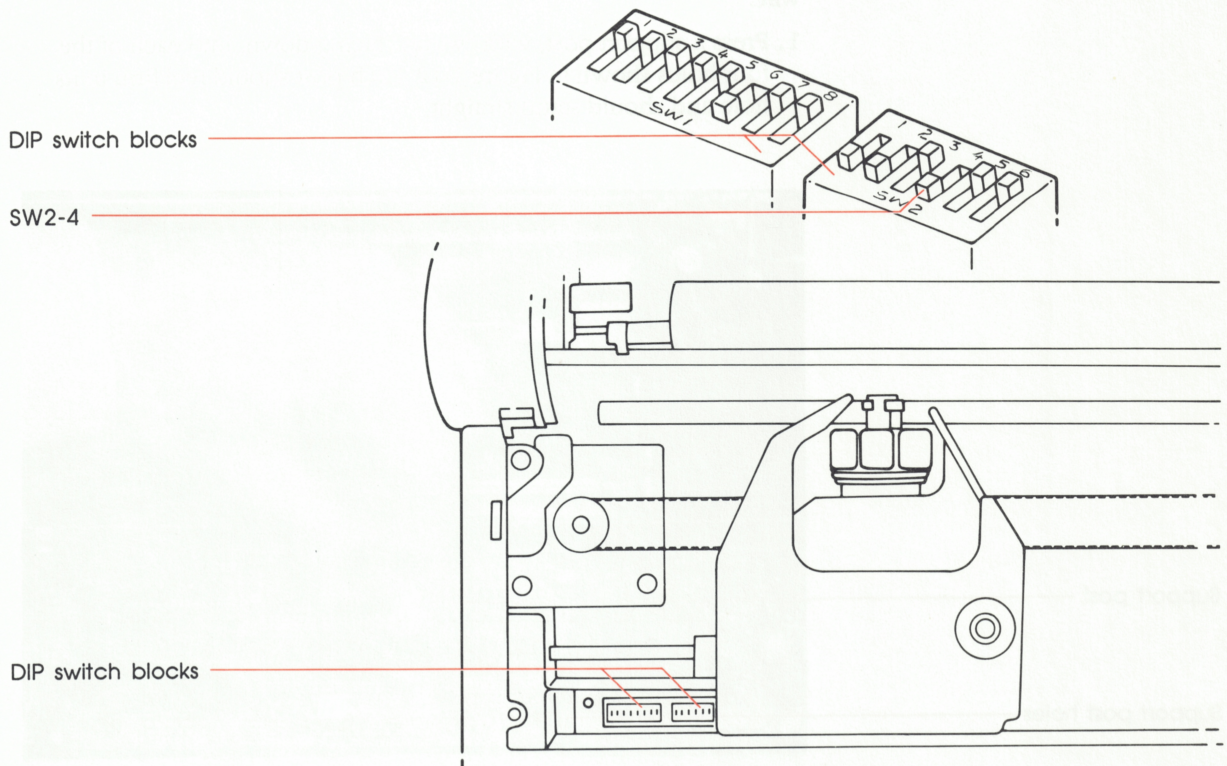


Figure 1-11
Location and settings for ImageWriter II DIP switches

Warning Do not change the positions of switches SW2-5 or SW2-6. These switches are factory-set and should only be reset by an authorized Apple dealer technician.

Now you're ready to connect the LocalTalk card to your ImageWriter II printer.

Connecting the LocalTalk card

Connecting the LocalTalk card involves three tasks: installing the support posts, placing the card, and connecting the card's ground wire.

1. Press a support post, with "wings" facing down, into each of the four holes shown in Figure 1-12. Each post should feel firm in its hole and should stand straight.

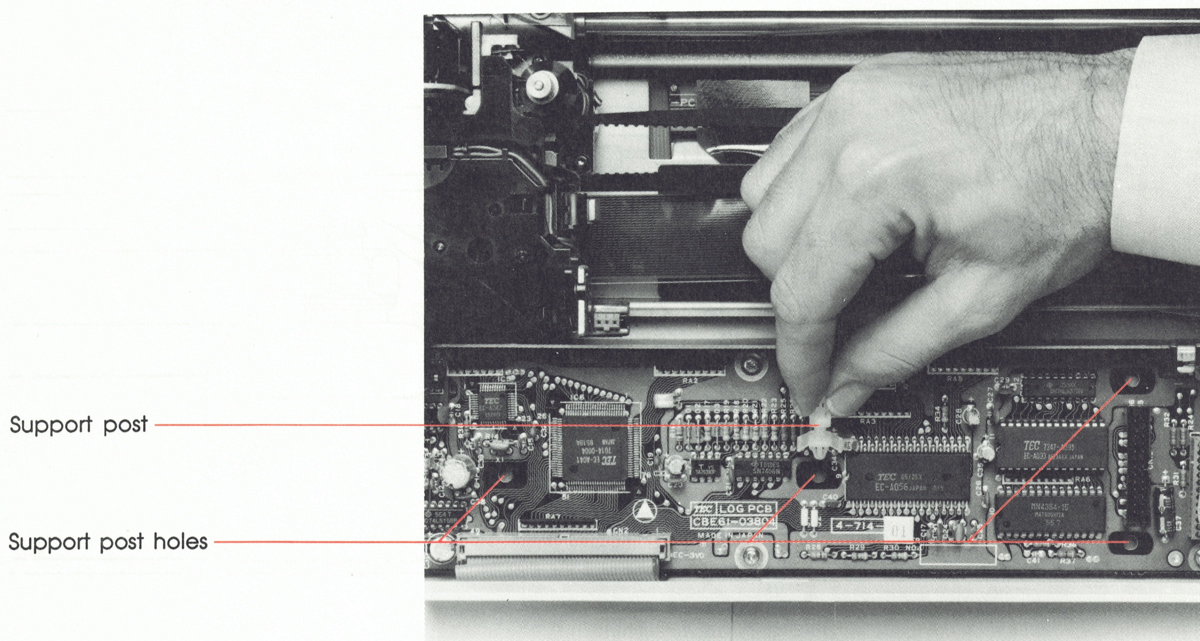


Figure 1-12
Locations of support post holes

2. Remove the LocalTalk card from its anti-static bag, handling the card by its edges. Avoid touching the card's components.

Important Save the card's anti-static bag. If you ever need to remove, store, or transport the card, return it to the bag to protect it from electrostatic damage. To protect the card from breakage, put it between the foam cushions in its box.

---

3. Slide the ribbon cartridge all the way to the left.
4. Place the card (component side up) so that its receiving holes meet the support posts.
5. Press the card down firmly until the support posts click through the receiving holes.
6. Press down firmly on the right corners of the card to fasten the card's connector to the printer's connector, as shown in Figure 1-13.

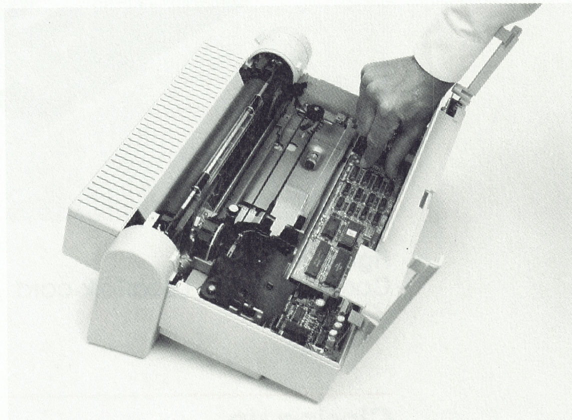


Figure 1-13
Correct position for the LocalTalk card

7. Locate the screw that secures the front left corner of the printer's circuit board and the vertical tab to the immediate right of the screw. Press the connector on the end of the card's ground wire over this vertical tab. (See Figure 1-14.)

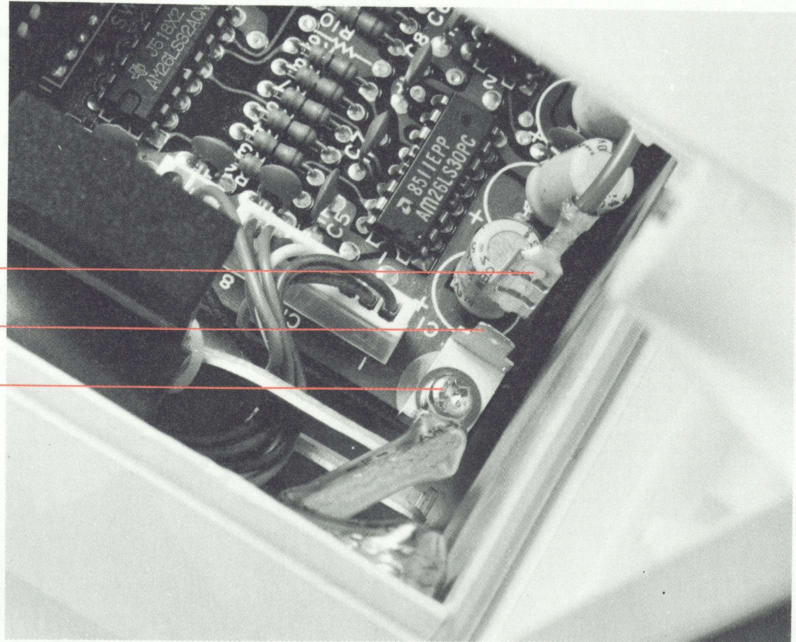


Figure 1-14
Connecting the LocalTalk card ground wire

Closing up

Now you're ready to reassemble the printer and connect to the network. Follow these steps to close up your ImageWriter II:

1. Lift the front edge cover from its hinged position and press it back into place.
2. Tighten, but do not over-tighten, the two screws.
3. Remount the ribbon cartridge on the ribbon cartridge deck.

4. Replace the printer's front cover, as shown in Figure 1-15. (The ImageWriter II will not print if the front cover is loose or off.)

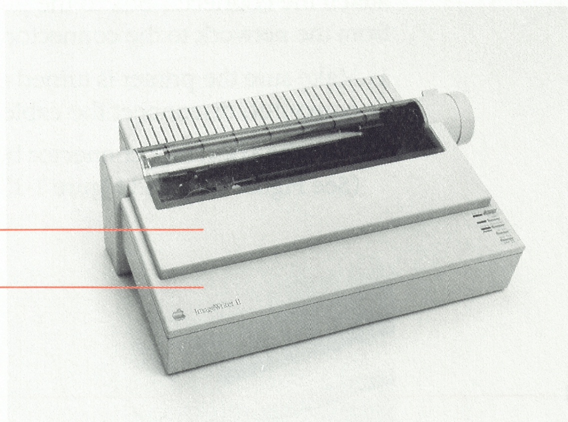


Figure 1-15
ImageWriter II with LocalTalk card installed

To finish your hardware installation, continue with the next section, "Connecting to the Network."

Connecting to the network

With your printer reassembled, you can connect it to the network. Make sure that you have a LocalTalk connector box, one or more cables, and, if necessary, a cable extender at hand. Regardless of whether you're connecting the ImageWriter to the end of the network or between two devices already on the network, you need to prepare the printer for the network.

❖ *By the way:* Apple 2- and 10-meter cables are PVC-coated and are not designed to be routed through walls or suspended ceilings unless through conduit.

If you have any questions regarding how the printer fits into your network architecture, see the *LocalTalk Cable System Owner's Guide.*

Warning Make sure your network is open-ended. Don't connect it in a closed loop.

Network preparations

Before connecting the ImageWriter to the network, you need to attach the connector box to the printer and the LocalTalk cables from the network to the connector box. Follow these steps:

1. Make sure the printer is turned off. If the printer is connected to a computer, disconnect the cable from the printer port.
2. Plug the LocalTalk connector box cable into the printer port. (See Figure 1-16 and Figure 1-17.)

Serial interface socket

Connector box cable

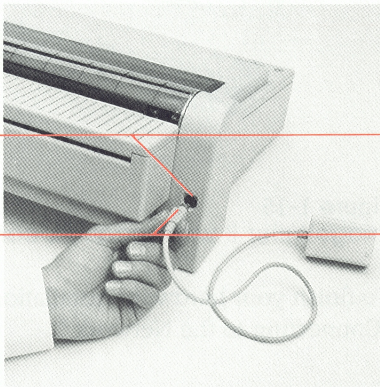


Figure 1-16
Plugging the LocalTalk connector box into the ImageWriter II

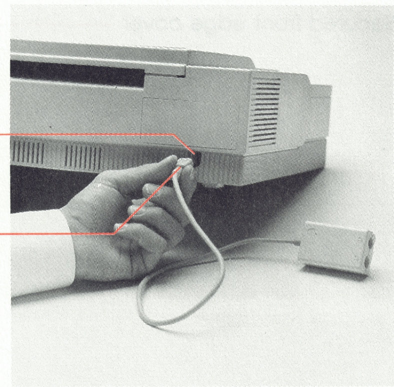


Figure 1-17
Plugging the LocalTalk connector box into the ImageWriter LQ

3. Plug the LocalTalk cable into either socket on the LocalTalk connector box, as shown in Figure 1-18.

Important When connecting any network parts, make sure that the arrows on each part meet each other. (The arrows indicate the side that should be up.)

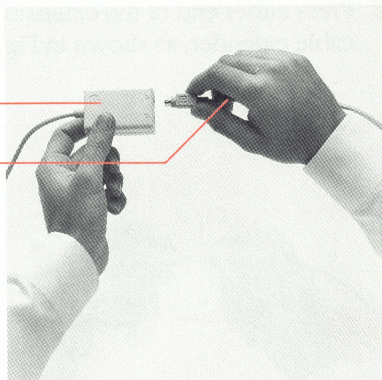


Figure 1-18
Plugging the LocalTalk cable into the connector box

If you're not using extension cables, skip to the appropriate section—either "Connecting to the End of the Network" or "Connecting Between Two Network Devices." The rest of this section shows you how to add extension cables to the printer's LocalTalk cable.

4. If you want to add an extension cable to your LocalTalk cable, press the cable extender onto the open end of the printer's LocalTalk cable, as shown in Figure 1-19.

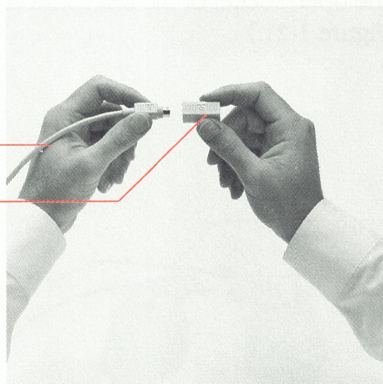


Figure 1-19
Connecting a cable extender to a LocalTalk cable

5. Press either end of the extension cable into the open end of the cable extender, as shown in Figure 1-20.

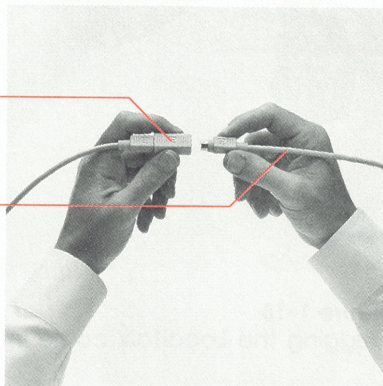


Figure 1-20
Connecting an extension cable to the cable extender

Connecting to the end of the network

To connect an ImageWriter to the end of the network, plug the open end of the LocalTalk cable or extension cable from the printer into the open socket of the last connector box on the network. (See Figure 1-21.)

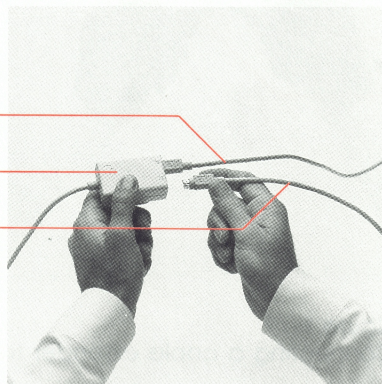


Figure 1-21
Connecting the LocalTalk cable to the last connector box

Your ImageWriter printer is now physically connected to the other devices in the network. To prepare to use the ImageWriter in the AppleTalk network system, turn on the printer. Then turn to Chapter 2 if you have a Macintosh computer, or Chapter 3 if you have an Apple II computer.

Connecting between two network devices

Connecting a device between other devices on the network can momentarily disrupt network activities. If you must connect your ImageWriter while others are using the network, warn them beforehand, so they can wrap up network activities (such as printing, electronic mail, and file sharing) before you connect the printer. People should not use the network while you are altering it. Work quickly but carefully, and tell other users when you're finished.

Before you begin, study Figure 1-22. It illustrates the current configuration. Devices 1 and 2 are connected on the network. The ImageWriter, ready for connection, stands between them. Study the drawing in relation to where you intend to put the printer on your network.

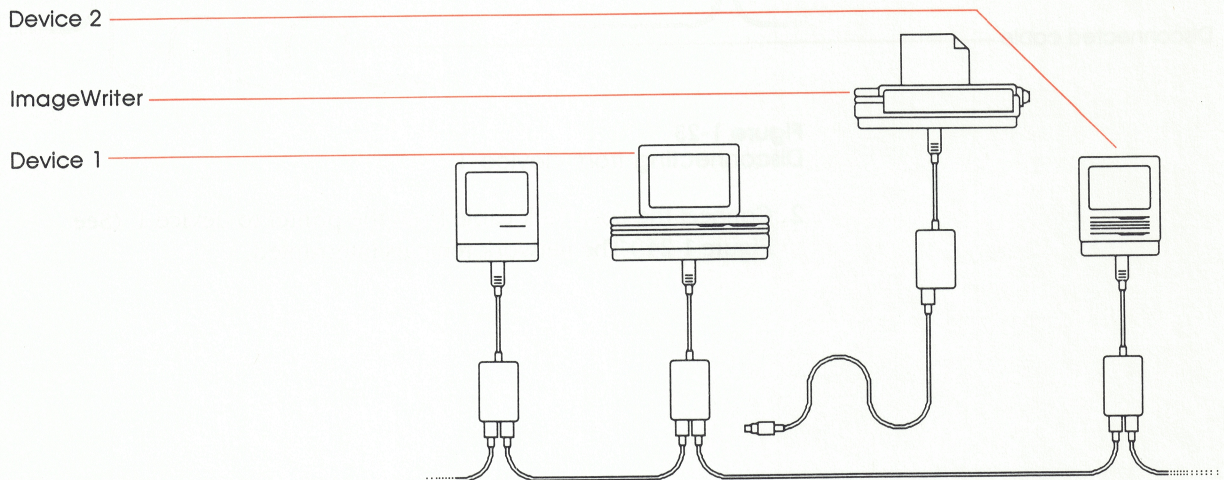


Figure 1-22
The network before connecting the ImageWriter

❖ *Note:* The network shown in Figures 1-23 through 1-25 shows no extension cables or adaptors. If you're using extension cables, follow the *pattern* of connecting and disconnecting cables, as appropriate.

To install the ImageWriter between two network devices, follow the four steps below:

1. To begin, disconnect the network cable from device 1. (See Figure 1-23.) This interrupts the network.

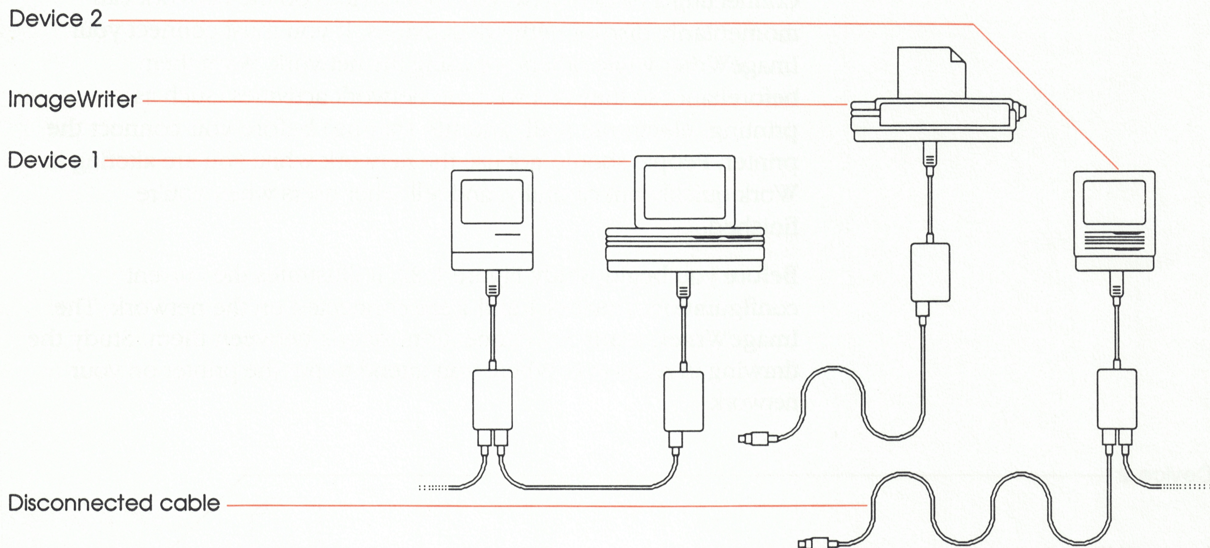


Figure 1-23
Disconnecting from device 1

2. Connect the LocalTalk cable from the printer to device 1. (See Figure 1-24.) The network remains interrupted.

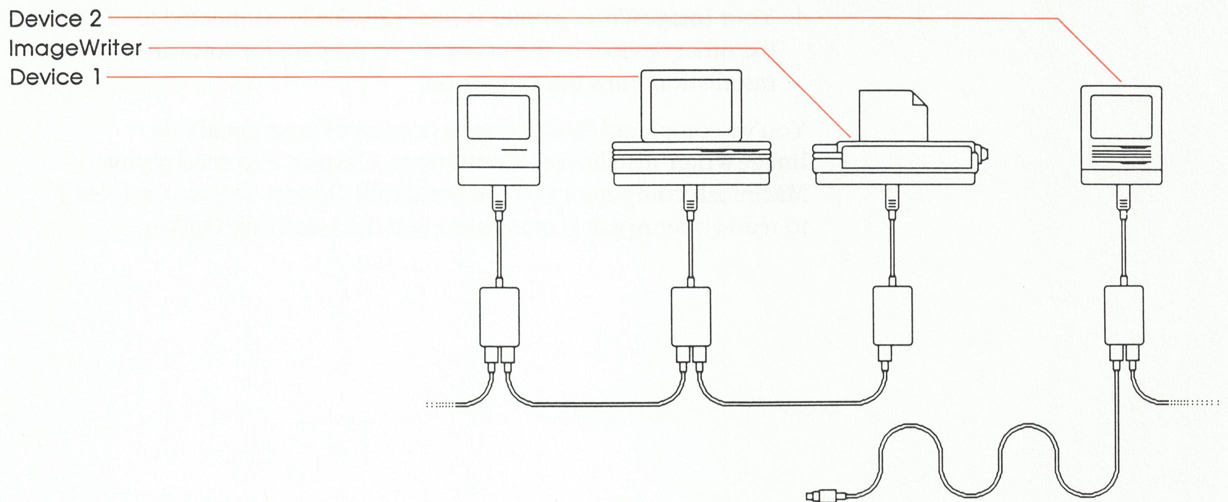


Figure 1-24
Connecting the LocalTalk cable from the printer to device 1

3. Connect the open cable end from the network (from device 2) to the ImageWriter, as indicated in Figure 1-25. The network is no longer interrupted.

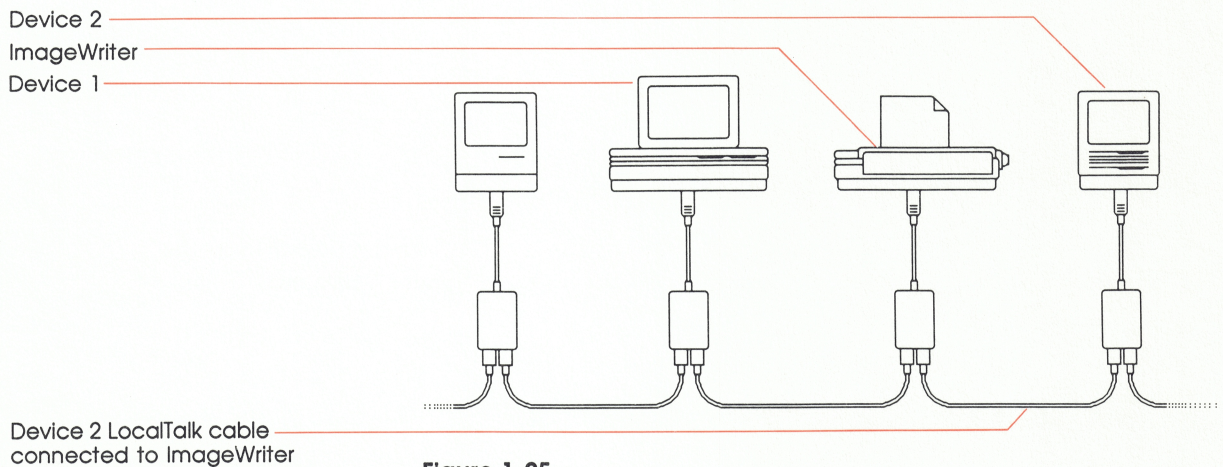


Figure 1-25
Connecting the LocalTalk cable from the network to the ImageWriter

4. Your ImageWriter printer is now physically connected to the other devices in the network. To prepare for software installation, turn the printer on.

You've completed the hardware portion of your LocalTalk ImageWriter installation. Continue to Chapter 2 to read about Macintosh computers and the LocalTalk Option. Skip to Chapter 3 to read about Apple II computers and the LocalTalk Option.

Chapter 2

Macintosh Computers and the LocalTalk Option

This chapter explains how to prepare Macintosh computers to print on an ImageWriter II or ImageWriter LQ printer that is part of an AppleTalk network system.

If your network includes both Macintosh and Apple II computers, and more than one printer, make sure that the network administrator follows the sequence for naming the printers. Then each user can follow the instructions for printing with an AppleTalk ImageWriter from the type of computer he or she uses.

This chapter describes the four basic steps you'll follow to install AppleTalk software:

- install printer resources from the *ImageWriter II/LQ AppleTalk* disk in your System Folder
- name your printers with the Namer application
- choose the printer that you want to work with using the Chooser desk accessory
- test your hardware and software installation

Installing AppleTalk software on a Macintosh

To print through the AppleTalk network, you need to install AppleTalk software on your hard disk or on your 800K startup disks. Although these instructions apply to any Macintosh computer, how you use them will depend on your network configuration.

If your network consists of only one computer and one or more peripheral devices, such as printers or file servers, proceed to the section "Installing Printer Resources."

If you have more than one computer on your network, try the following two-step strategy:

- First, the network administrator should go through the software installation procedures. If the network has more than one ImageWriter II, ImageWriter LQ, or LaserWriter®, the network administrator should run the Namer to name network devices.
- Second, the network administrator should route this manual, the *ImageWriter II/LQ AppleTalk* disk, and the list of printer names to the rest of the people on the network, so they can install AppleTalk software on their startup disks and choose their printers. They should not, however, do any further naming of devices.

❖ *Note:* After you install the AppleTalk software, make sure to install any printer fonts that you need in your System file. See your printer manual for specific instructions.

Installing printer resources

The printer resources that let you use an ImageWriter in an AppleTalk network system are on the *ImageWriter II/LQ AppleTalk* disk.

You install the printer resources in the System Folder on your startup disk. Your startup disk may be a hard disk or a 3.5-inch disk. If you use separate 3.5-inch startup disks for some applications, you must install AppleTalk ImageWriter printer resources for each type of printer you want to use on each of the startup disks.

With the ImageWriter II/LQ LocalTalk Option you must use current versions of the System file, Finder, and Chooser. Table 2-1 shows the earliest versions of each that you can use with each printer type. You can also use any version later than those listed.

Table 2-1
Current system software

ImageWriter/Macintosh	System	Finder	Chooser
ImageWriter LQ			
Macintosh Plus, SE, II	4.1	5.5	3.1
ImageWriter II			
Macintosh 512K	3.2	5.3	2.3
Macintosh Plus, SE	4.0	5.4	3.0
Macintosh II	4.1	5.5	3.1

If you're not sure which version numbers you're using, use the Get Info command from the File menu to find out. If you need a software update, see your authorized Apple dealer or representative.

Warning Never keep more than one System file and one System Folder on a startup disk. Doing so may confuse you, and will certainly cause problems for your Macintosh.

Here's how to install AppleTalk ImageWriter printer resources:

1. Turn the Macintosh off and then on again. This ensures that new printer resources can be installed without problems.
2. Insert the *ImageWriter II/LQ AppleTalk* disk into the internal drive and open the icon representing the disk. (You can select the icon and choose Open from the File menu, or just double-click the icon.)
3. Open your startup disk if it isn't already open. (See Figure 2-1.)

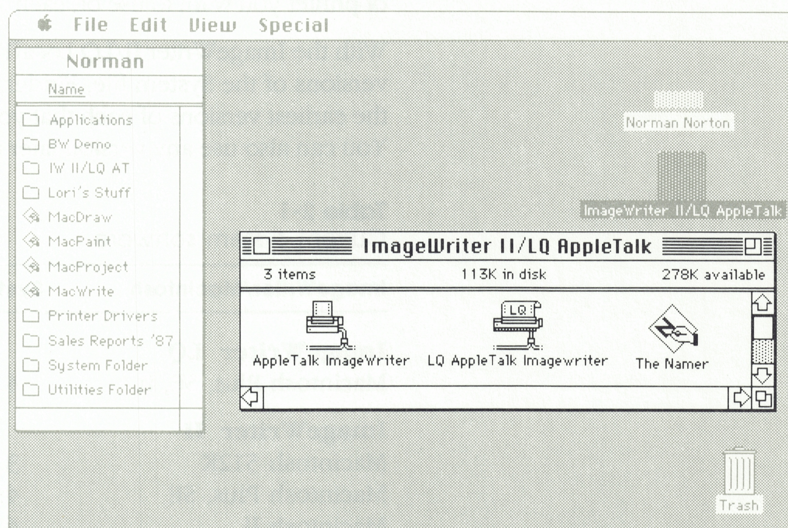


Figure 2-1
Desktop with AppleTalk ImageWriter folder open

4. Drag the AppleTalk ImageWriter icon or the LQ AppleTalk ImageWriter icon or both (the icon represents the printer resources) to the System Folder on your startup disk.

   You can select both icons by holding down the Shift key while clicking one icon and then the other. This technique is called Shift-clicking. (See Figure 2-2.)

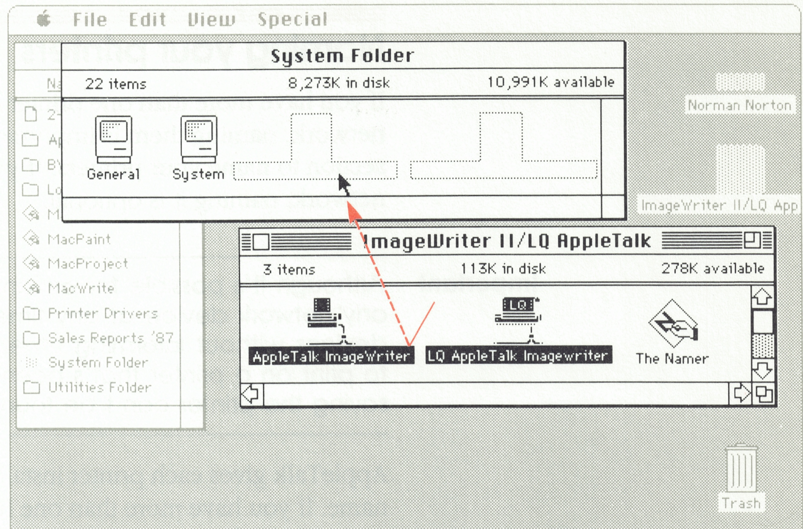


Figure 2-2
Installing printer resources

If you have inadequate disk space, remove as many printer resources, files, fonts, and desk accessories from your startup disk as necessary. Then repeat the selection process again (steps 1 through 3).

- **To remove printer resources:** Drag the icon to a backup disk for safekeeping, then drag the icon to the Trash.
- **To remove files:** Drag selected files to the Trash.
- **To remove fonts and desk accessories:** Use the Font/DA Mover to select fonts and desk accessories to remove. If you need help see your Macintosh owner's guide or the system software guide that came with your computer.

5. If you want to install printer resources on another startup disk, repeat steps 2, 3, and 4.
6. If you don't intend to name your printer, eject the *ImageWriter II/LQ AppleTalk* disk. Restart the Macintosh with your new AppleTalk startup disk, and go on to the section "Choosing a Network Printer from a Macintosh."

   If you have multiple ImageWriter or LaserWriter printers and intend to name them, keep the *ImageWriter II/LQ AppleTalk* disk in the internal drive and go on to the next section, "Naming Your Printers."

With printer resources installed, you can name or choose your printer; see the appropriate sections.

Naming your printers

If you have more than one printer of the same type installed on your network, naming them is important. Follow the instructions in this section to name your printers. If you have only one printer on your network, naming it is optional.

Important Although it's possible for anyone on your network to rename any network device at any time, no one should rename devices without informing other network users. If you attempt to print on a printer that's been renamed, you'll get a message saying the printer can't be found.

AppleTalk gives each printer installed on the network a default name. If you have more than one ImageWriter on your network (regardless of whether it's an ImageWriter II or an ImageWriter LQ), the network automatically names them *ImageWriter*, *ImageWriter 1*, *ImageWriter 2*, *ImageWriter 3*, and so on, as each one is turned on.

The difficulty with such naming is that you don't know which ImageWriter is which. (Is the printer next to your desk *ImageWriter 2,* or is that the one down the hall?) To avoid confusion, use the Namer to name each printer. When you click the AppleTalk ImageWriter icon, you'll see a list of ImageWriter II printers. When you click the LQ AppleTalk ImageWriter icon, you'll see a list of ImageWriter LQ printers.

❖ *Note:* If you want to skip naming, go to the next section, "Choosing a Network Printer from a Macintosh."

Remember to keep the *ImageWriter II/LQ AppleTalk* disk in a safe place in case you need to rename your printers. The network administrator may wish to install the Namer on a hard disk.

Important Make sure that your printers are plugged in and turned on before naming or choosing them. AppleTalk cannot recognize a printer that is not on.

Follow these steps to name your printers:

1. Open the Namer program from the *ImageWriter II/LQ AppleTalk* disk.

   The Namer shows an icon for each *type* of device on your network, such as ImageWriter II, ImageWriter LQ, LaserWriter, and file server. Your Namer will look similar to the one shown in Figure 2-3.

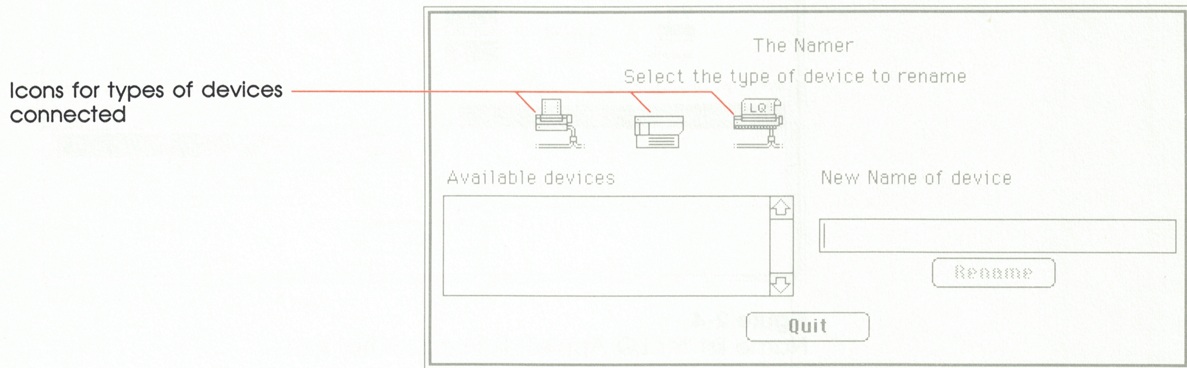


Figure 2-3
The Macintosh Namer

2. Select the AppleTalk ImageWriter icon type you want to name first. (See Figure 2-4.)

   Naming proceeds by device. That is, you select the icon for the type of device that you want to name, then name all the devices of that type.

As soon as you select an icon, the Namer automatically lists all the devices of that type. For example, when you select the LQ AppleTalk ImageWriter icon, the names (default or specified) of all ImageWriter LQ printers on your network appear in the name list.

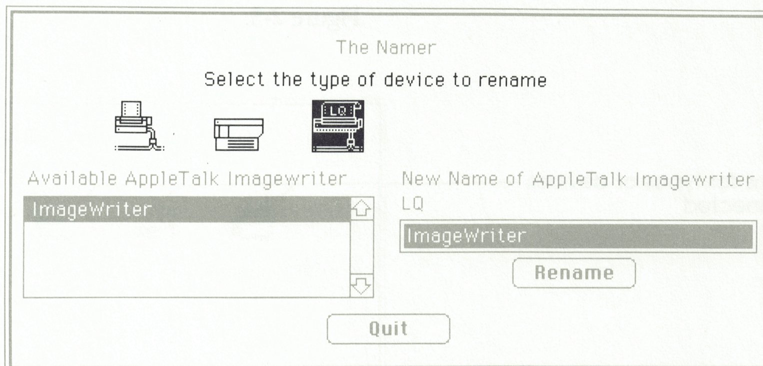


Figure 2-4
Name list for LQ AppleTalk ImageWriter icon

❖ *Note:* If no device icon appears, or if a printer is missing from the name list, the necessary printer resource is not on the current disk or the device is not turned on. If the device is on, drag the AppleTalk ImageWriter or LQ AppleTalk ImageWriter icon to your startup disk to install the printer resource. To discover why a particular icon is gray, just click it. A message will appear explaining why the device is currently inaccessible.

3. Select the first AppleTalk ImageWriter name that you want to change from the list on the left.

4. Change the name in the edit box to the name that you have chosen for the printer. Then click Rename. (See Figure 2-5.)

   Create names that make sense. Many people name printers by department location (*Sales*, *Copy Room*) or by the name of the person nearest the printer (*Waldo*, *Hortense*).

   The Namer takes about ten seconds to name a printer.

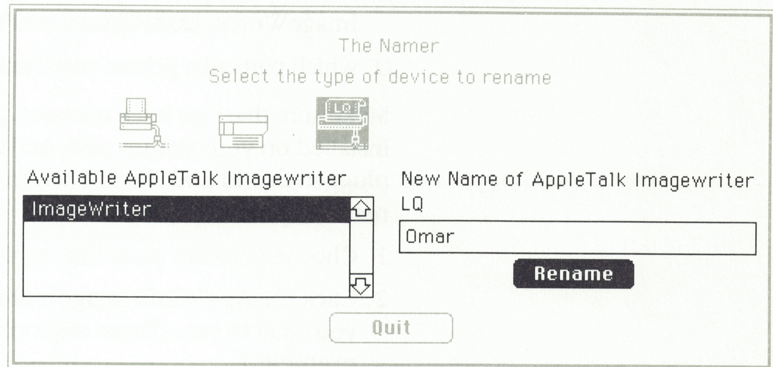


Figure 2-5
Naming a printer

5. Edit any other AppleTalk ImageWriter names as you see fit.
6. If you have another type of ImageWriter, LaserWriter, or other devices to name, follow the procedures in steps 2 through 5.
7. When you have named all your devices, click Quit.

After you have named your printers, go to the next section and choose the one you want to use for your current print job.

Choosing a network printer from a Macintosh

Before AppleTalk can carry text to a printer, you need to tell your Macintosh three things:

- □ that AppleTalk is connected
- □ what type of printer (AppleTalk ImageWriter, LQ AppleTalk ImageWriter, LaserWriter) you're choosing
- □ which particular printer you want to work with

Make sure that you have restarted the Macintosh with AppleTalk installed on your startup disk, and make sure that the printer is plugged in and turned on. Then follow these steps to choose a network printer:

1. Choose Chooser from the Apple menu.
2. Click the AppleTalk ImageWriter icon for the type of ImageWriter you want to use. (These steps use an ImageWriter LQ as an example.)

   If your network is subdivided into several AppleTalk zones, choose the zone that your printer belongs to by clicking the zone name.

   A list of AppleTalk ImageWriter LQ printers appears. Your Chooser window should resemble the one shown in Figure 2-6.

   The Chooser window displays icons for any printer resources you have installed in the System file on your startup disk.

   ❖ *Note:* The Chooser shows different ImageWriter II and ImageWriter LQ icons representing printers that are connected to the network and those that are not. Choose the AppleTalk ImageWriter or LQ AppleTalk ImageWriter icon to print through the AppleTalk network system.

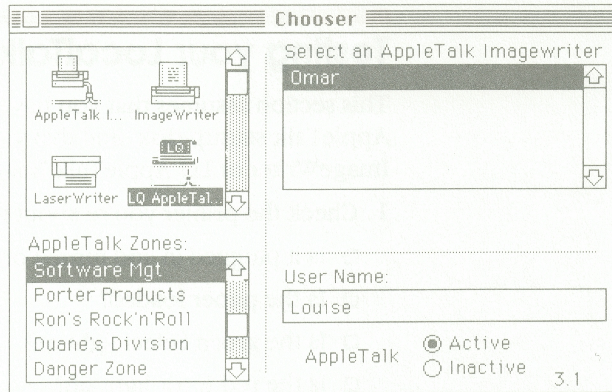


Figure 2-6
The Chooser window

3. Select the name of the ImageWriter that you want to work with.

   ❖ *By the way:* If you have multiple printer resources installed, you can choose a different printer any time you wish by running the Chooser. When you choose a different printer, you can prepare document formatting for it, even if that printer isn't currently connected.

   When you run the Chooser from within an application, you should always check Page Setup from the File menu to make sure that the application has recorded your recent choice and that the page formatting is correct.

4. Type in your name in the User Name box.

   Although the ImageWriter doesn't need this information, some network devices (such as a file server or LaserWriter) do.

5. Close the Chooser window.

With the network hardware and software installed, continue to the next section to test your ImageWriter on the network.

Testing your LocalTalk Option installation

This section assumes that you have started your Macintosh with an AppleTalk startup disk, and that you've chosen an AppleTalk ImageWriter or LQ AppleTalk ImageWriter in the Chooser.

1. Check the printer you're about to test:
   - □ Is it plugged in and turned on?
   - □ Is the paper loaded?
   - □ Is the green Select light on?
   - □ Is the red Error light off?

   When you've confirmed that the printer is ready, go on to step 2.

2. Choose Print Catalog from the File menu. You'll see a dialog box similar to the one shown in Figure 2-7.

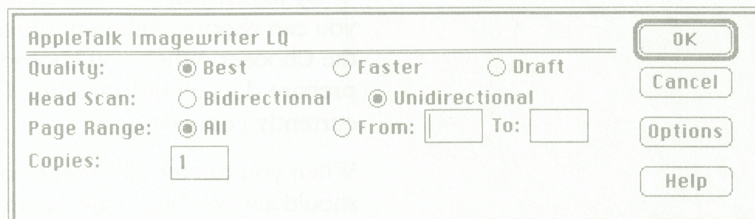


Figure 2-7
AppleTalk ImageWriter LQ dialog box

3. Click OK.

   After a few moments, the printer should print a directory of files in the open window on your screen in the current view (by Icon, by Name, and so on).

   If you choose Draft Quality, the printer will print words rather than icons.

If your ImageWriter LQ or ImageWriter II produced an accurate representation of the current disk directory, congratulations! Your printer is correctly installed on the network.

If you encountered an installation problem, see Chapter 4.

Chapter 3

Apple II Computers and the LocalTalk Option

This chapter explains how to prepare all Apple II computers with AppleTalk capability to print on an ImageWriter II or ImageWriter LQ that is part of an AppleTalk network system.

If your network includes both Apple II and Macintosh computers, and more than one printer, make sure that one person follows the sequence for naming the printers. Then each user can follow the instructions for printing from the type of computer he or she uses.

This chapter describes the four basic steps you'll follow to get ready to print:

- □ Apple IIGS® only: set your computer to use AppleTalk using the Control Panel program
- □ name your printers with the Namer program
- □ choose the printer that you want to work with using the Chooser program
- □ test your hardware and software installation

If you're using an Apple IIGS, you must tell your computer what devices are connected to which ports. Read the following section, "Apple IIGS Preparation," and then continue to the sections on naming and choosing your printer and testing your card installation.

If your Apple II computer is already configured for use in an AppleTalk network system, skip to the section "Naming Your Printers."

Apple IIGS preparation

Apple IIGS computers have AppleTalk capability built in. But you must activate AppleTalk in the Control Panel before you can print on a printer in an AppleTalk network system. Follow these steps:

The Command key is the key with the outline of an Apple and a propeller symbol on it.

1. Press Command-Control-Esc to get to the Control Panel.

   You can also get to the Control Panel by pressing Option-Control-Reset. This sequence restarts the computer.

2. Choose Slots from the Control Panel menu and press Return. (See Figure 3-1.)

Control Panel		
Slots		
✓ Slot 1: Printer Port		
✓ Slot 2: Modem Port		
✓ Slot 3: Built-in Text Display		
✓ Slot 4: Mouse Port		
✓ Slot 5: Smart Port		
✓ Slot 6: Disk Port		
✓ Slot 7: Your Card		
Startup Slot: 5		
Select: ← → ↓ ↑	Cancel: Esc	Save: ↵

Figure 3-1
The Slots screen

3. If your LocalTalk cable is connected to the printer port, set slot 1 to "Your Card" by pressing the Right Arrow key. If your LocalTalk cable is connected to the modem port, set slot 2 to "Your Card."

   ❖ *Note:* Slot 1, slot 2, and slot 7 cannot all be set to built-in functions. Since slot 7 will be set to "AppleTalk," either slot 1 or slot 2 must be set to "Your Card."

4. Set slot 7 to "Built-in AppleTalk."
5. Press Return to save your settings.

   ❖ *Note:* Your changes won't take effect until you restart your computer by pressing Command-Control-Reset or turning the computer off and then on again.

For more information on the Control Panel, see the *Apple IIGS Owner's Guide.*

Continue to the next section, "Naming Your Printers."

Naming your printers

Although these instructions apply to any Apple II computer set up for use in an AppleTalk network system, how you use them will depend on your network configuration.

If your network consists of only one computer and one or more peripheral devices, such as printers or file servers, proceed through this section.

If you have more than one computer on your network, try the following two-step strategy:

- First, the network administrator should run the Namer to name network devices.
- Second, the network administrator should route this manual and the list of network device names to the rest of the people on the network, so they can set their Control Panels to gain access to network printers and choose those printers. They should not, however, do any further naming of devices.

If you have more than one printer of the same type installed on your network, naming them is important. Follow the instructions in this section to name your printers. If you have only one printer on your network, naming it is optional.

AppleTalk gives each printer installed on the network a default name. If you have more than one ImageWriter on your network (regardless of whether it's an ImageWriter II or an ImageWriter LQ), the network automatically names them *ImageWriter*, *ImageWriter 1*, *ImageWriter 2*, *ImageWriter 3*, and so on, as each one is turned on.

The difficulty with such naming is that you don't know which ImageWriter is which. (Is the printer next to your desk *ImageWriter 2*, or is that the one down the hall?) To avoid confusion, use the Namer to name each printer.

❖ *Note:* If you want to skip naming, go to the next section, "Choosing a Network Printer from an Apple II."

Important Make sure that your printers are plugged in and turned on before naming or choosing them. AppleTalk cannot recognize a printer that is not on.

These instructions apply to version 1.1 of the Namer. If you have version 1.2, your screen will look slightly different from the screens shown in Figure 3-2 and Figure 3-3 and you will have the option of controlling the program with the keyboard instead of with the mouse. Prompts on the screen will explain what to do. If you need more specific instructions for your Namer, see the user's guide that came with your system disk.

Follow these steps to name your printers:

1. Open the Namer program. (For the Apple IIGS, it's in the AppleTalk folder on the *Apple IIGS System Disk*.)

   Your Namer will look similar to the one shown in Figure 3-2.

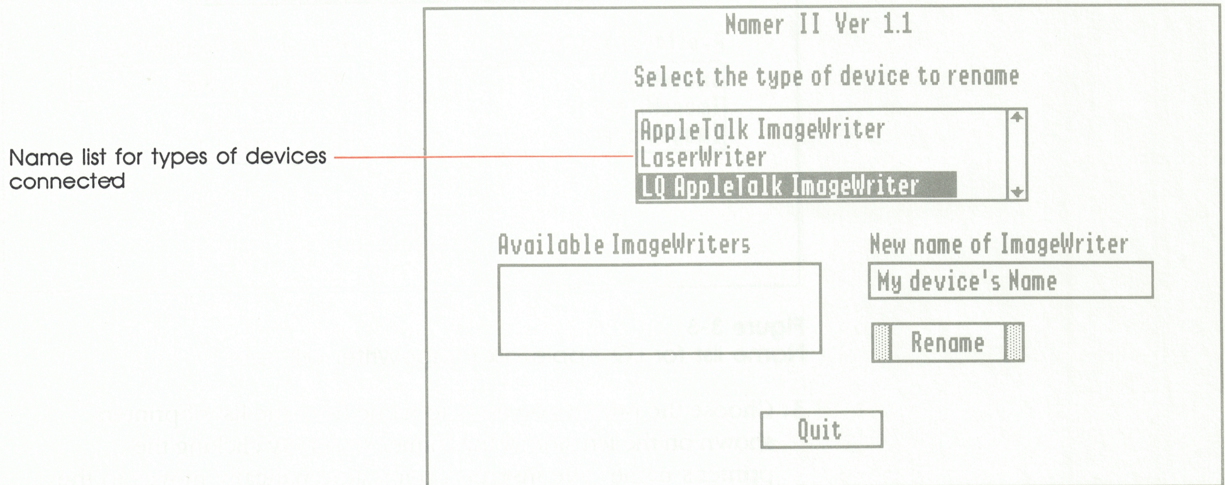


Figure 3-2
The Apple IIGS Namer

2. Choose the type of printer you want by clicking the name of the AppleTalk ImageWriter printer device type. The cursor becomes an hourglass while the Namer checks the network for all printers of that type, and displays a list of printers and their current names in the Namer window.

Naming proceeds by device. That is, you select the name for the type of device that you want to name, then name all the devices of that type. For example, when you select the LQ AppleTalk ImageWriter name, the names (default or specified) of all ImageWriter LQ printers on your network appear in the name list. (See Figure 3-3.)

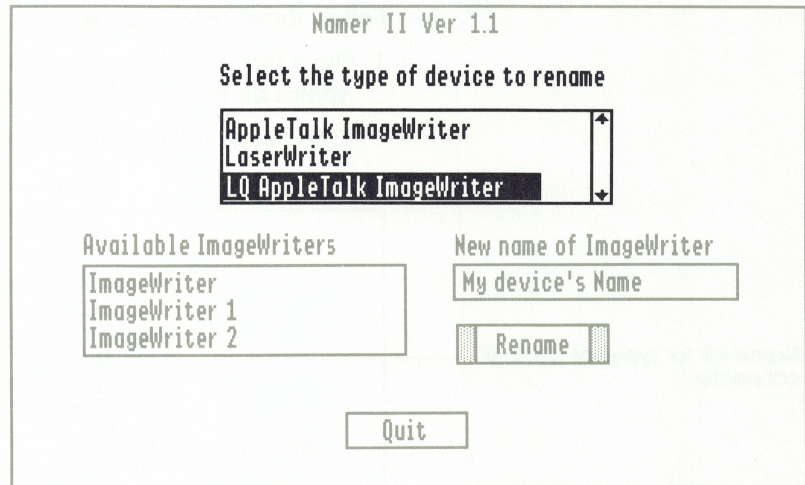


Figure 3-3
Name list for LQ AppleTalk ImageWriter printers

3. Choose the printer you want to name from the list of printers shown on the left side of the Namer screen by clicking the printer's name. The insertion point automatically moves to the new name box.
4. Type a new name or edit the current name. (See Figure 3-4.)

   Create names that make sense. Many people name printers by department location (*Sales*, *Copy Room*) or by the name of the person nearest the printer (*Susan*, *Benjamin*).

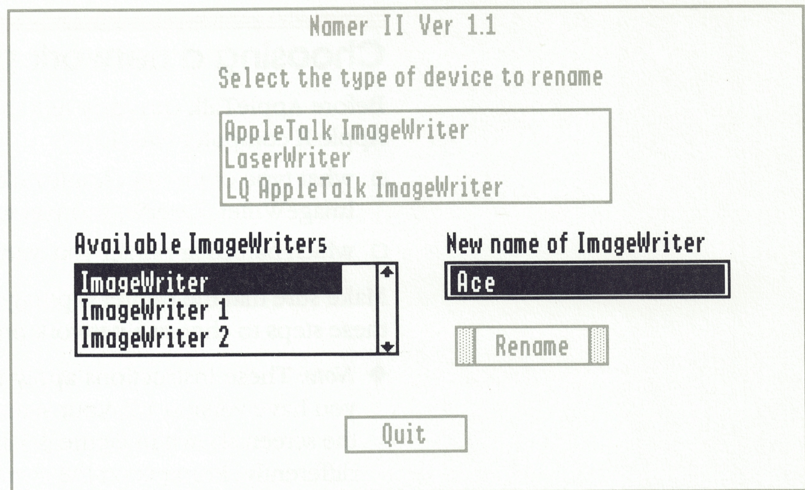


Figure 3-4
Naming a printer

5. Click the Rename button.

   If there is no Rename button in your version of the Namer, press Return to accept the new name.

   The Namer takes about ten seconds to name a printer.

6. Edit any other AppleTalk ImageWriter names as you see fit.
7. If you have another type of ImageWriter, LaserWriter, or other devices to name, follow the procedures in steps 2 through 5.
8. When you have named all your devices, click Quit.

Important Although it's possible for anyone on your network to rename any network device at any time, no one should rename devices without informing other network users. If you attempt to print on a printer that's been renamed, you'll get a message saying the printer can't be found.

❖ *Note:* For more information on your Namer, see the user's guide that came with your system disk.

After you have named your printers, go to the next section and choose the one you want to use for your current print job.

Choosing a network printer from an Apple II

Before AppleTalk can carry text to a printer, you need to tell your Apple II computer two things:

- □ what type of printer (AppleTalk ImageWriter, LQ AppleTalk ImageWriter, LaserWriter) you want to work with
- □ which particular printer you want to work with

Make sure that the printer is plugged in and turned on. Then follow these steps to choose a network printer:

❖ *Note:* These instructions apply to version 1.1 of the Chooser. If you have version 1.2, your screen will look slightly different than the screen shown in Figure 3-5 and will operate somewhat differently. Prompts on the screen will explain what to do. If you need more specific instructions for your Chooser, see the user's guide that came with your system disk.

1. Open the Chooser program. (For the Apple IIGS, it's in the AppleTalk folder on the *Apple IIGS System Disk.*)
2. Choose the type of printer you want to use by clicking it.

   If your network is subdivided into several AppleTalk zones, choose the zone that your printer belongs to by clicking the zone name.

   Your Chooser window should resemble the one shown in Figure 3-5.

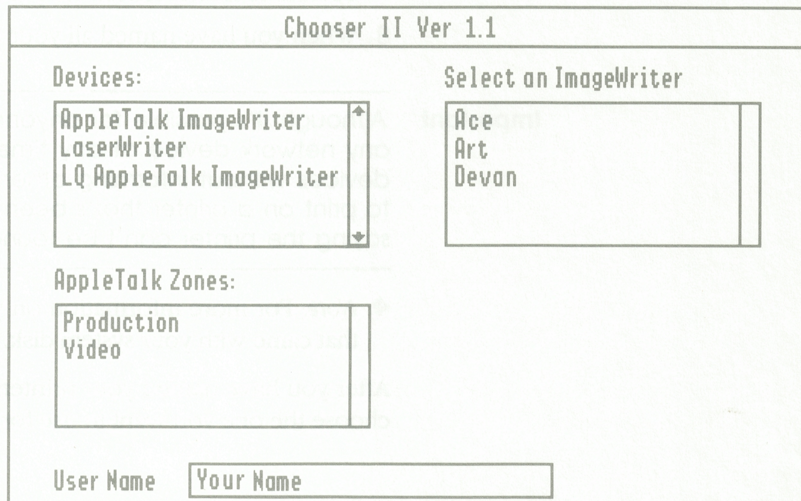


Figure 3-5
The Chooser window

3. Choose the printer you want to use from the list of printers shown on the right side of the screen by clicking it. Click the printer name or press Return even if the name is already highlighted.

❖ *Ports:* If you are using version 1.2 of the Chooser, you will be asked to indicate which port you are using for the LocalTalk cable connection. Choose LocalTalk if the LocalTalk cable is connected to a card inside your computer. Choose Serial if the LocalTalk cable is connected to one of the serial ports on your Apple IIGS.

4. Click the User Name box and type your name. Some applications use the information in the User Name box to let other people know who is currently using the printer.

5. Quit by pressing Command-Q or by clicking Quit if there is a Quit button.

❖ *Note:* Some Apple IIGS applications have a Choose Printer command in the File menu. See the manual that came with your application for instructions on using this command.

With the network hardware and software installed, it's time to test your ImageWriter on the network. Continue with the section "Testing Your LocalTalk Option Installation."

Testing your LocalTalk Option installation

This section assumes that the Chooser is on your startup disk and that you have run the Chooser and selected an AppleTalk ImageWriter. You also need ProDOS (version 1.2 or later) on your startup disk to print on a network printer.

There are two ways to test your printer. You can run an application, such as AppleWorks®, and print from within the application. You can also use BASIC commands to test your printer. First, check the ImageWriter you're about to test.

- ☐ Is it plugged in and turned on?
- ☐ Is the paper loaded?
- ☐ Is the green Select light on?
- ☐ Is the red Error light off?

When you've confirmed that the printer is ready, go on to the section for the type of tesing you wish to do.

Testing from within an application

1. Start up the application.
2. Open a document.
3. Choose Print. If your program asks what slot your printer is in, type `slot 7.`

❖ *Note:* Depending on which application you use, you may need to specify information about the ImageWriter. See your ImageWriter owner's guide for help.

After a few moments, the printer should print a copy of the open document.

If your ImageWriter II or ImageWriter LQ produced an accurate representation of the current document, congratulations! Your printer is correctly installed on the network.

If you encountered an installation problem, see Chapter 4.

Testing with BASIC

1. Press Control-Reset.
2. At the blinking cursor type `PR#7.`
3. Press Return.
4. At the blinking cursor type `Catalog.`

   After a few moments, the printer should print a directory of files on the current disk.

   If your ImageWriter II or ImageWriter LQ produced an accurate representation of the current disk directory, congratulations! Your printer is correctly installed on the network.
5. Type `PR#0` to turn off the ImageWriter.

   You can also turn off the ImageWriter manually if you need to.

If you encountered an installation problem, see Chapter 4.

Chapter 4

Troubleshooting and Maintenance

This chapter describes what to do if your ImageWriter II/LQ LocalTalk Option installation wasn't successful. It also tells you how to disconnect and reconnect your ImageWriter on an AppleTalk network system. For further information on service, support, user groups, and becoming a developer, read the sections at the end of this chapter.

Troubleshooting the connection

If the installation test isn't successful, or if you encounter another problem, go through the questions listed in the following section. If you have a Macintosh, read the following section and the section on error messages. If you still can't solve the problem, see your authorized Apple dealer or representative.

Important Any time that you have difficulty with a printer, turn the printer off and then back on. This action often clears up software-related problems.

Nothing happens

This means *nothing*—no printout and no error message (Macintosh computers receive error messages from AppleTalk). If you are using a Macintosh and you received an error message, skip to the next section. If not, check these items:

- ☐ Is the ImageWriter you chose turned on? Is it selected? Is the Error light on?
- ☐ Is paper loaded?
- ☐ Are the LocalTalk connectors firmly plugged into both the computer and the ImageWriter printer?
- ☐ Are all the connections along the network sound?
- ☐ Is the ImageWriter printer itself functioning properly?

  Run the ImageWriter II or ImageWriter LQ self-test. Turn the printer off. Then press the Form Feed button and hold it down while turning the printer back on. Then release the Form Feed button after the print head begins to move. The printer should begin a repeated printing of its character set. Press the On/Off switch again to stop the test. If the printout looks good, the problem isn't with the ImageWriter's printing mechanism.

❖ *Note:* The self-test printout gives the status of AppleTalk (either ON or OFF). If the red Error light flashes during the self-test and you're not out of paper, the LocalTalk card is not responding. Check your card installation.

AppleTalk error messages on a Macintosh

The five basic error messages are self-explanatory and point to an immediate solution. These messages refer to the following problems:

- ☐ The ImageWriter is out of paper.
- ☐ The printer is jammed (either a paper jam or a carriage jam).
- ☐ The printer's front cover is off or ajar.
- ☐ The printer is deselected or off line.
- ☐ The printer is busy. You don't have to cancel printing. AppleTalk keeps track of the order in which documents arrive at the printer, and it will print yours as soon as its turn comes around. A dialog box gives you a choice of actions.

A sixth error message tells you that AppleTalk can't find your printer. If you get this message, check these potential problem areas:

- ☐ Select Chooser from the Apple menu. Is the printer the chosen printer?
- ☐ Is the printer turned on?
- ☐ Is the printer properly connected to the network?
- ☐ Are all connections firm? Has someone left a cable end dangling?
- ☐ Is there any evidence of cable damage?
- ☐ Did you cycle the power (turn the printer on, off, and then on again) after changing DIP switch settings?
- ☐ Is the ImageWriter SW2-4 DIP switch set to the closed, or down, position?

Warning Do not run your ImageWriter II or ImageWriter LQ in an AppleTalk network system unless the DIP switch SW2-4 is in the closed position, pointing toward the front of the printer. Running the printer on the network with the switch in the open position could stop the whole network from functioning.

Disconnecting and reconnecting your network printer

From time to time, you may want to remove your ImageWriter printer from the network for service or for printing directly from a computer. This section shows you how to disconnect and reconnect an ImageWriter. It also gives you a four-point checklist to help you determine if you have selected the correct software settings for printing through a network or printing directly from a computer.

Disconnecting your printer from the network

To disconnect an ImageWriter from an AppleTalk network system, follow these four steps:

1. Turn the ImageWriter off.
2. Unplug the LocalTalk connector from the printer's serial interface socket.
3. If you intend to connect the printer directly to a computer, you need to reset DIP switch SW2-4 to the open, or up, position (facing toward the rear of the printer).

   ❖ *Apple II users:* If you're using an ImageWriter LQ, you must set DIP switches SW2-1 and SW2-2 to the closed (down) position to print directly from your computer.

   On the ImageWriter II, remove the front cover and the front edge cover. On the ImageWriter LQ, open the DIP switch cover. Change the DIP switch settings and close the covers.
4. Check software settings as explained in "Printer Software Settings," later in this chapter.

Reconnecting your printer to the network

To reconnect an ImageWriter to the network, follow these five steps:

1. Turn the ImageWriter off.
2. If the ImageWriter was connected directly to a computer, reset the SW2-4 DIP switch to the closed, or down, position. Close the printer.
3. Plug the LocalTalk connector into the printer port.
4. Turn the ImageWriter on.
5. If you were printing directly from a computer before reconnecting, change software settings as explained in the next section.

Printer software settings

Whenever you connect an ImageWriter printer to an AppleTalk network system or to a computer, always check the following settings. See the section for the type of computer you're using.

Macintosh computers

- **DIP switch SW2-4:** This switch should be set to closed (down) for a printer in an AppleTalk network system or open (up) for printing directly from a computer.
- **AppleTalk connection:** In the Chooser, click AppleTalk Active or AppleTalk Inactive as appropriate.
- **Printer port:** The printer (serial) port must be selected for printing through the AppleTalk network system.

  If you have a Macintosh connected to an AppleTalk network system and *also* want to connect the computer directly to a printer, you must connect the printer cable to the modem port and select the modem port from the Chooser for direct-connect printing.
- **Type of printer:** From the Chooser, select the *type* of printer you want to work with—AppleTalk ImageWriter for printing through the network, or just ImageWriter for printing directly from a computer to the printer. If you've chosen an AppleTalk ImageWriter, you'll also need to choose a particular ImageWriter from the printer list.

Apple II computers

- **DIP switch SW2-4:** This switch should be set to closed (down) for a printer in an AppleTalk network system or open (up) for printing directly from a computer.

  ❖ *ImageWriter LQ users:* If you are using an ImageWriter LQ, remember to set switches SW2-1 and SW2-2 to the closed (down) position to print directly from your computer.

- **Printer port:** The printer (serial) port must be selected for printing through an AppleTalk network system.

  If you have an Apple IIGS, connect the printer cable to either the printer or the modem port. Set the appropriate slots using the Control Panel program.

  If you have any other Apple II with AppleTalk network system capability, connect the printer cable to the AppleTalk port. Check to make sure the printer is selected in the Chooser.

- **Chooser:** Open the Chooser and choose the name or the type of printer you want to use. Choose the particular printer you want to print on from the list of connected printers.

Service and support

To help you get the best performance from your system, Apple Computer, Inc. has established a worldwide network of full-support authorized Apple dealers. If you need answers to technical questions or information about product updates, your authorized Apple dealer can help you. Apple's technical support organization backs each dealer and international technical support group via an AppleLink® network, a state-of-the-art on-line electronic information service, to ensure prompt, reliable assistance.

Your dealer has the latest information on new hardware and software products as well as product updates. If you wish to upgrade your system, your dealer can help you select compatible components.

If your product requires service, your local authorized Apple dealer is trained and ready to support you. Apple provides factory-quality parts and the latest available diagnostic equipment to the more than three thousand authorized Apple service centers throughout the world. Apple guarantees parts and warranty labor. (Regulations in each country determine the length of warranty. Some restrictions may apply, depending on the country of original purchase.)

If for some reason you cannot return to the authorized dealer from whom you purchased your system, go to the nearest service location. For the location nearest you, in the United States, call (800) 538-9696; in Canada, call (800) 268-7796 or (800) 268-7637.

For locations in other countries, either call the Apple headquarters in your country or write to:

Apple Computer, Inc.
Attn: Customer Relations
20525 Mariani Avenue
Cupertino, California 95014
USA

Apple also offers service options designed to meet your needs. One of these is the Apple*Care*® Service Agreement (available in the United States, Canada, and Australia only), which extends full warranty coverage up to three years. Your Apple*Care* contract will be honored at any participating authorized Apple dealer within the country of purchase—an added benefit if you relocate. Local service means time saved in getting your Apple system back to work.

You can purchase Apple*Care* at any time, but it's a good idea to purchase it with your system, or at least before your warranty has expired, to avoid an owner-paid inspection.

User groups

Ask your dealer for the name of an Apple or Macintosh user group near you. If you live in the United States, you can call 1-800-538-9696 for the name, address, and telephone number of up to three Apple or Macintosh user groups in your geographic area.

Outside the United States, ask your dealer or get in touch with:

The Boston Computer Society
One Center Plaza
Boston, Massachusetts 02108
(617) 367-8080

or

Berkeley Macintosh User Group
1442-A Walnut Street #62
Berkeley, California 94709
(415) 849-9114

Either of these organizations can provide you with the name of a user group near you. You can also join either of these groups or ask them for information on starting your own user group.

Developer's information

Many independent developers are working on AppleTalk products. If you would like to become an AppleTalk application or hardware developer, ask an authorized Apple dealer about technical documentation. Or contact the AppleTalk Developer's Program directly:

AppleTalk Developer's Program
Mail Stop 3-A
Apple Computer, Inc.
20525 Mariani Avenue
Cupertino, California 95014

THE APPLE PUBLISHING SYSTEM

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